



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/700,050 | 11/04/2003 | Jin-hwan Kim | Q78037 | 3115 |
| 23373 | 7590 | 10/17/2006 | EXAMINER | |
| SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | TRUONG, BAO Q | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2875 | |

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/700,050 | KIM ET AL. | |
| | Examiner | Art Unit | |
| | Bao Q. Truong | 2875 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,21,23-28 and 35 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 23-28 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,8-11 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 6,7,12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 3, 5, 8, 9-11, 14-17 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Miyazaki Yasuhiro [Japan Publication number 2002-260427].

Regarding claim 1, Miyazaki Yasuhiro discloses a backlight unit having a light guide panel [6], a point light source [4], a refraction member [1, 31] being shaped to refract the light emitted from the point light source [4] toward an optical axis of the point light source [4] in order to reduce an azimuth angle of light incident upon the light guide panel [6], the refraction member [1, 31] having a prism array of V-shaped [1b] facing the light guide panel [6], and a transparent member [8] attached to the prism array (figures 1-5 and 7).

Regarding claim 3, Miyazaki Yasuhiro discloses the apexes being formed by an angle between 80 and 120 degrees (figures 1 and 5).

Regarding claims 5 and 9, Miyazaki Yasuhiro discloses the refraction member [31] including a transparent portion [33] (figure 7).

Regarding claims 8 and 20, Miyazaki Yasuhiro discloses a plurality of light sources [4] and transparent portions [33] being provided in a one-to-one relationship (figure 12).

Regarding claims 10 and 11, Miyazaki Yasuhiro discloses the transparent portion [33] being formed in the prism array [31] by removing a portion of the v-shaped prisms that are arranged within a predetermined angle with respect to the optical axis of the light source (figure 7 and 12).

Regarding claim 14, Miyazaki Yasuhiro discloses light allowed to pass through the transparent portion being not refracted by the prism array (figures 7 and 12).

Regarding claims 15 and 16, Miyazaki Yasuhiro discloses the refraction member [1, 31] and the light guide panel [6] being discrete elements or united (figures 2 and 4).

Regarding claim 17, Miyazaki Yasuhiro discloses the refraction member [1] being connected to the light guide panel [6] at peripheral edges to form a hollow portion therebetween (figures 2 and 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Publication number 2002-260427 in view of the applicant's admitted prior art.

Regarding claims 18 and 19, Miyazaki Yasuhiro discloses a light guide panel [6] with a reflector [7] formed beneath the light guide panel [6] (figures 2 and 4), but not clearly show the hologram pattern or the scattering pattern formed on the light guide panel.

The applicant's admitted prior art of figure 2 shows the hologram pattern [30] or the scattering pattern formed on the light guide panel [10] (specification page 2 paragraph [07] and page 3 paragraph [11]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the reflector of Miyazaki Yasuhiro with the hologram pattern as taught by the applicant's admitted prior art to diffusively reflect light for purpose of providing more uniform light output of the backlight unit.

Allowable Subject Matter

6. Claims 6, 7, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 6 and 12 recite the width of the transparent portion being determined so that a full width half maximum of the light emitted by the light source and incident upon the light guide panel is at a minimum value, and light flux/steradian is at a maximum value.

Claims 7 and 13 recite the transparent portion being formed to allow light emitted from the point light source within an angle of plus/minus 12 degrees with respect to the optical axis of the point light source to pass through.

The limitations discussed above are neither disclosed nor suggested by the prior art of record.

8. Claims 21 and 23-28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter of claim 21:

Claim 21 have been amended to include the allowable subject matter of claim 22, which has been indicated in the previous office action.

Claims 23-28 are dependent on claim 21.

Response to Amendment

9. Applicant's amendment with respect to claims 1 and 21 have been considered but are moot in view of the new ground(s) of rejection of the applicant submitted IDS.

Conclusion

10. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 12 July 2006 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Q. Truong whose telephone number is (571) 272-2383. The examiner can normally be reached on Monday-Friday (8:00 AM - 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2875

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bao Q. Truong
Examiner
Art Unit 2875



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800